

GCKI "Chonda" Class

The Chonda (or Clone Honda) class is intended to be a low cost, minimal maintenance racing class. This is a spec racing class designed to equalize the power plants of all participants in the class. The engines are affordable and intended to give life to older chassis that may be hidden deep in your garages; however they must be racing karts with nose and side pods and must have some type of rear bumper. There are no specs for the chassis make or model, however they must be a full sized chassis (no Cadets) and if you are converting a chassis with front brakes they must be disconnected. All Chonda class karts must pass tech, so make sure they are safe and have all the pins, clips, etc. installed. If you are unsure if your chassis will pass inspection, please email or ask on the forum before converting it for the class.

"Chonda" Engine Preparation and allowed aftermarket parts

These are the "allowed parts" and steps necessary to prepare the Harbor Freight engine for competition.

1. Harbor Freight (Blue Greyhound, part 66015-0VGA) 2009 or newer. Do not buy the California version, part 66014-0VGA. No Yellow engines allowed.
2. Governor and oil sensor must be removed. There are different methods for removing the governor and oil sensor. See <http://arcrcracing.blogspot.com/> for a good video. There is also another method that does not require special tools on you tube in 4 parts. <http://www.youtube.com/watch?v=FTNbDvfiHoo>
3. **Install DJ-1109I CL-1 Improved Cam (New rule for 2011)**
4. Install race prep parts kit, DJ-1014 from www.arcrcracing.com. Select kit **1147** for the HF Blue '09 and newer engine. This kit includes the following additional or replacement parts to prepare your engine for the class.
 - DJ-114X ARC top plate/throttle hookup (1147 for HF Blue '09)
 - 6931 ARC billet air filter adaptor
 - DJ-1257 Choke hold
 - 6877 Pulse inlet fitting
 - Walbro Fuel Pump
 - 6899 Angled air filter
 - 5' fuel hose
 - DJ-1415 Chain guard/heat shield
5. **Install DJ-1138RLV Box Stock Header & Muffler AKRA/WKA. (New rule for 2011)**
6. The DJ-1415 (chain guard/heat shield) may not fit on all karts due to seat size and/or seat stays without modification. A chain guard is required, so if the kit supplied guard will not fit you must fabricate one.
7. Carburetor jet may be drilled or replaced to a no-go setting of .042 max. Stock emulsion tube is required and must not be altered.
8. Clutch is limited to the Max Torque SS "Clone" clutch. This clutch is available from many dealers under different part numbers. Do not buy the basic SS clutch, make sure to get the one for "Clone" engines that has an internal key and a black engagement spring. This clutch must remain stock with the black spring that engages in the 2900-3000 range. (see parts spreadsheet for part numbers from a couple of dealers)
9. The choke retaining arm provided with the ARC kit does not fit properly without modification. However, if you use a thicker gasket between the ARC billet air filter adapter it will work without modification. (Part number DJ1315 from arcrcracing.com)
10. Valve lash may be adjusted and it is advised to check it before racing.
11. Spark plug is open, but it must have the ring/gasket or a temp sensor ring/gasket may be substituted.
12. Engine oil is open.

13. A brace is allowed from the cylinder (there is a threaded hole) to the muffler to minimize vibrations that can cause header failure or the muffler to become loose. (The new ARC header/muffler combo comes with this brace.)
14. Header wrap and/or a heat shield may be installed to prevent burns from the header/muffler. These devices must be safely attached and not interfere with engine operation or driver safety. The Tech Director has the discretion to request modifications.

“Chonda” Class Rules

1. The Chonda class will be run as a single race group.
2. Minimum age is 12.
3. The 320 weight class must have a .500 intake restrictor. (PURPLE ARC restrictor)
4. The 360 weight class must have a .550 intake restrictor. (BLUE ARC restrictor)
5. The 405 weight class is not required to have an intake restrictor.
6. **Tires are spec MG Yellow, 4.5 front and 6.0 minimum rear. Tires must be scrubbed-in. New tires or tires that have not been scrubbed in are not allowed. (New rule for 2011)**
7. Fuel is 87 octane pump gas only, no additives allowed.
8. **Clutch driver is open. (New rule for 2011)**
9. Rear gearing is open.
10. Single engine karts only!
11. All karts must pass safety tech.
12. All karts are subject to post-race inspections.
13. If motor does not pass post-race tech the competitor will be disqualified. If a willful discrepancy affecting performance is determined, the engine may be stamped with an xxx on the base plate and will not be allowed in competition at GCKI.
14. **Claimer Rule:** Winner's engine may be claimed by anyone finishing in the top 5 positions at a cost of \$200 less add on parts. (Clutch, above mentioned ARC kits, jet, and mount) The \$200 will be split with \$160 going to the engine owner and \$40 going to the Tech Director. Claimed engines will be impounded by Tech Director along with the claimer funds. Claimed engine will be thoroughly inspected for performance enhancing modifications. If the engine does not pass tech, the claimer does not have to purchase the engine and \$160 will be refunded to the claimer unless he/she decides to keep the engine. If a willful discrepancy affecting performance is determined, the Tech Director may elect to disqualify the winner which will change the race results and points.

Refusing to cooperate with the claiming process will result in immediate disqualification of competitor along with forfeiture of any points earned to date in the class. Competitor will also not be allowed to compete any longer in the class.

The following engine specific rules taken from “AKRA 2011 Rules” will be used during tech. Official addendums or changes by ARKA to the "AKRA 2011 Rules" will be followed at GCKI:

AKRA Box Stock/6.5 Clone/2011

ENGINE SPECIFIC TECH SHEET FOR: BOX STOCK 6.5 OHV

Description: Single cylinder, 2 valve, OHV 4 cycle

Important Note: All parts must be Box Stock factory production parts unless otherwise specified in this rules manual. No machining or alteration of parts is allowed unless specifically noted. All parts will be subject to a comparison to a known Box Stock part (when performing a "stock part" comparison check it is recommended to use a +/- .005" tolerance). Engine will be teched as raced.

Combustion chamber volume: 26.5 cubic centimeter minimum, with piston at TDC, using prescribed procedure.

Cylinder Head Requirements: Must be OEM casting only. Porting and / or grinding are not permitted. Valve seats are two angles 45 degrees valve face and 30 degrees top relief. Intake seat maximum ID .897" , Exhaust seat maximum ID .862". Stock head bolts only, must have four. Head gasket/s maybe after market, must be of stock configuration, 2 gaskets permitted with a total minimum thickness of .008" and maximum of .020". No copper or aluminum gaskets allowed. Any stock configuration exhaust gasket allowed no other sealer.

Block Requirements: Block must remain stock as produced. Stub for governor may be removed and hole plugged. No machining of block allowed. Welding to the block shall be for rod damage repair only and may not constitute a functional modification. Stock cylinder bore is 2.685" max. Stroke is 2.123" + .010" or - .005". No piston pop-out allowed. Matting surface finish of block and cylinder head is a non tech item, surfacing of both to correct gasket failure and meet cc check allowed. May use 2 side cover gaskets of stock configuration.

Carburetor requirements: Huayi OR RUI*ING OR Jing Ke model carb only. Carb to intake sealer is gasket only no other sealer allowed. Choke must be as supplied from factory, but may be fixed to stay in open position. Venturi .615" NO-GO. Rear carb bore .751" NO-GO. Main fuel jet .042" NO-GO. Low speed idle jet .019" NO-GO. Stock emulsion tube must be used and unaltered, .066" max ID (no pass through). Throttle shaft - .115" minimum. Butterfly - .037" minimum. Aftermarket air filter adapter allowed (max length of 1.375).

Valve Train: Stock valve cover only with any stock configuration gasket, no sealer. Factory stock rocker arms 1:1 ratio and push rods only. Stock valves only 45 degree angle only both valves, Intake valve Max OD .985" +/- .005" and Exhaust valve Max OD .948" +/- .005", no modifications allowed. Only Box Stock valve springs. Max wire diameter on spring wire is .071" with a maximum tension of 10.8 lbs. at a height of .850". Lash cap on exhaust valve only. Valve stem seal allowed only on Intake valve, maximum lip thickness of .027". Minimum thickness of Intake retainer .230" , Exhaust retainer .250". BS lifters only, no modifications allowed.

Ignition system: Stock Box Stock system only and must be unaltered. Kill switch and low oil sensor may be disabled and removed. Flywheel: Box Stock flywheel only(5lbs 4 oz minimum) including plastic fins. No alterations of any type allowed. Maximum ignition timing advance is 18° BTDC when a straight edge placed on the outside of the right-hand coil leg is just touching the right-hand edge of the metal magnet cover of the flywheel. Flywheel key is non-tech.

Piston and Rings: Must be unaltered Box Stock only. No machining of piston and rings allowed.

Connecting Rod: Stock Box Stock rod only. No machining of any type allowed. Stock rod bolts only.

Crankshaft Requirements: Stock Box Stock crankshaft required. Machining, polishing, addition of material or other alteration of crankshaft is prohibited. Stock factory timing gear mandatory and must be installed in original location. Crankshaft journal diameter is 1.180"max - 1.168" min.

Camshaft Requirements: Stock camshaft cores only, ez-spin assy must remain as stock. Cam lobe base circle diameter .865" -.005"/+.010" Duration check for Intake and Exhaust lobes (taken off pushrod). Intake duration of 219 degrees at .050 lift/86 degrees at .200 lift. Exhaust duration of 222 degrees at .050" lift/97 degrees at .200" lift(All duration checks on intake and exhaust allow +/- 2 degrees for wear and gauge variances). Max Intake lift on cam .225" – Min .215"lift taken at the pushrod. Max Intake lift at the valve .238" Taken on valve spring retainer with zero lash. Max Exhaust lift on cam .232" – Min .222" lift taken at the pushrod. Max Exhaust Lift at the valve .242" Taken on valve spring retainer with zero lash.

Blower Housing Assembly: pull starter must be present and remain stock. Pull starter may be rotated for a better crank angle.

Header and Muffler Requirements: Single stage, one piece header made from .750" OD max and .635" ID max. steel tubing, with the RLV Mini B-91 Silencer installed at the end of pipe. The B-91 Silencer must be tread fitted to the pipe end. The entire exhaust pipe including the muffler is 15" max length and 10" min length. RLV Mini 91 Silencer Requirements: Part # 4117 Overall Length 5.465" minimum – 5.605" maximum. Threaded Nipple .690" maximum ID. Internal raised weld seam must be present. (ID as Mfg. NO Grinding, Reaming, or Polishing Allowed) . Rear baffle holes .1285" maximum, inner baffle holes .0965" maximum. Silencer must be utilized as produced, with no modifications or alterations permitted. Strap or brace required to silencer for support, and to insure silencer does not turn and unscrew.

Fuel Tank Requirements: Floor Mounted fuel tank mandatory (stock tank must be removed). Pulse type fuel pump allowed.

Fuel Pump Requirements: Fuel pump must be pulsed from either the crank case or the valve cover. You may install a flat metal plate in the original tank location for the purpose of mounting the throttle linkage and fuel pump.